U.S. Naval Research Laboratory's

Institute for Nanoscience

NRL has established an Institute for Nanoscience to conduct multidisciplinary research at the intersections of the fields of materials, electronics, and biology. As part of this effort, in 2002, NRL began construction of a major facility at NRL in Washington, DC, called the Nanoscience Research Laboratory.

The Institute is seen as the venue to bring together expertise from different disciplines in order to identify and exploit those cross-disciplinary opportunities that had not been previously accessible. As such, it will host scientists from other institutions for both short-term and long-term visits; collaborative interest has been expressed by leading academic institutions both here and abroad. The Institute will maintain a strong postdoctoral program and provide an active colloquium series.

NRL is undertaking an experiment in organizing this major program around the Institute and Laboratory building. The structure of this program will itself be an experiment. Scientists who are assigned to the Institute for Nanoscience will simultaneously hold permanent positions in their parent division. The Director of the Institute, Dr. Gary Prinz, reports directly to the Director of Research.

Since the Institute begins by combining existing efforts under a new technical management structure, much of the physical facilities will initially reside in the existing Division buildings. However, the new Nanoscience Research Laboratory will provide a common venue for the collaborations envisioned in these cross-disciplinary efforts.

For more information, visit http://nanoscience.nrl.navy.mil.

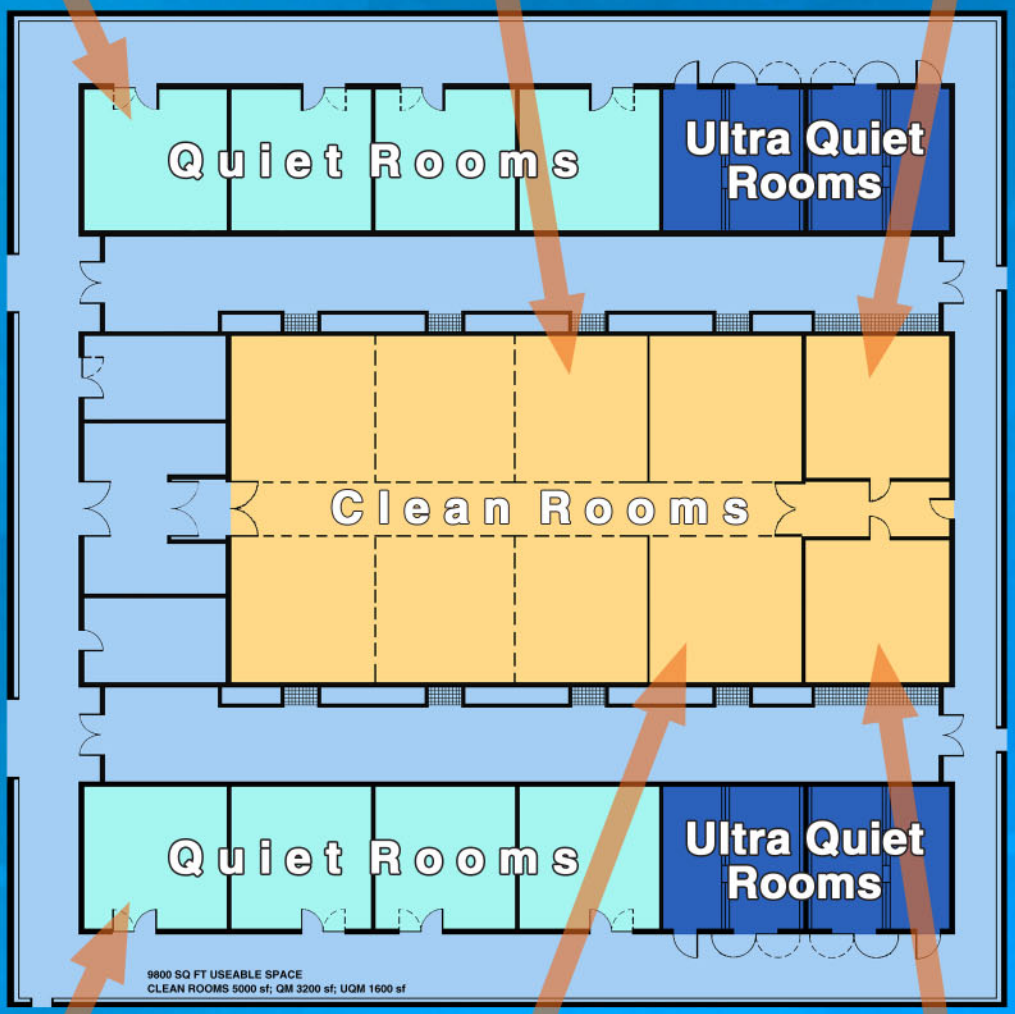
Naval Research Laboratory, Washington, DC

FACILITIES

Scanning Electron Microscope

Ion Beam Deposition

Electron Beam Lithography



Field Emission Transmission Electron Microscope

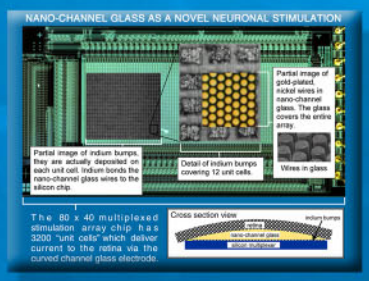
Deep Ultraviolet Mask Aligner

Focussed Ion Beam Work Station

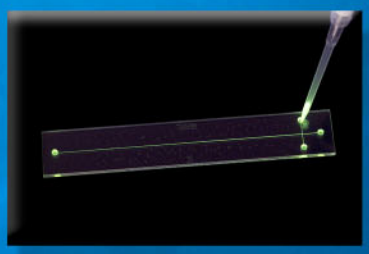
http://nanoscience.nrl.navy.mil

APPLICATIONS

Intraocular Retinal Prosthesis

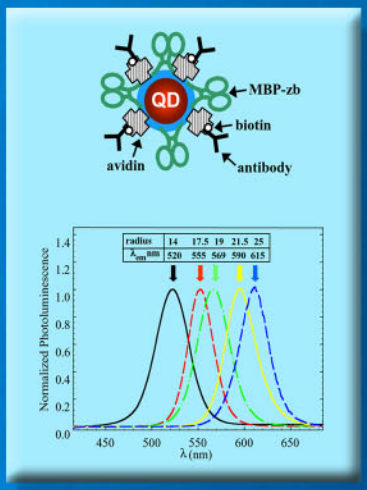


Lab on a Chip

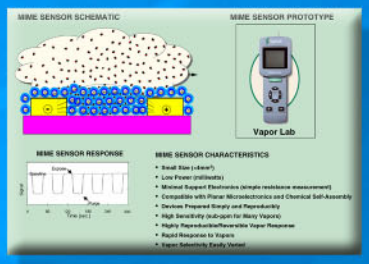


Non-Volatile Memory for Portable Equipment, i.e. Dragon Eye

Quantum Dot - Optical Techniques for Bio/Chemical Warfare Detection



Metal-Insulator-Metal (MIME) Nanocluster Based Vapor Sensor



Bead Array Counter (BARC)